



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
ONE CONGRESS STREET SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

September 19, 2007

Laurie Burt, Commissioner
Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA 02108

Re: Review and Action on Water Quality Standards Revisions

Dear Commissioner Burt:

By letter of January 12, 2007, the Massachusetts Department of Environmental Protection (MassDEP) submitted revisions to its Surface Water Quality Standards Regulations to the Environmental Protection Agency (EPA) for review. The revisions were adopted and effective on December 29, 2006, and were certified by MassDEP's General Counsel on January 11, 2007 as having been duly adopted pursuant to state law. By letter of March 26, 2007 EPA approved certain revisions and indicated that the additional revisions submitted by MassDEP were still under review. EPA has completed its review of a number of the additional revisions as further described below.

We commend MassDEP for adopting revisions to its water quality standards that strengthen the ability to protect the waters in Massachusetts, such as updating numeric criteria for toxic chemicals; adopting bacteria criteria protective of primary contact recreation consistent with EPA's 1986 recommendations; the addition of numerous waters to those designated as cold water; and adoption of an explicit recognition of cold water fish populations and their habitat as existing uses.

Pursuant to Section 303(c)(3) of the Clean Water Act (CWA) and 40 CFR Part 131, I hereby approve the following water quality standards revisions:

- ▶ The addition of language to the provision at 314 CMR 4.03(1)(b), that MassDEP adopted in 1996, clarifying when compliance schedules are allowed.
- ▶ Revision of the mixing zone provision at 314 CMR 4.03(2)(a) to clarify that mixing zones are to be limited to prevent lethality to organisms passing through.
- ▶ Revision of 314 CMR 4.03(4)(f) adding language to the federal language found at 40 CFR 131.10(g)(6) which is also in MassDEP's regulations.

- ▶ Additions to language MassDEP adopted in 1996, at 314 CMR 4.03(4), concerning the issuance of variances.
- ▶ Adoption of a “Special Resource Water” (SRW) provision at 314 CMR 4.04(4) providing a level of antidegradation protection consistent with the federal Outstanding National Resource Water provision at 40 CFR 131.12(a)(3).
- ▶ Revisions to 314 CMR 4.05(2) and 4.05(5)(e)(1) concerning site-specific criteria and providing that they will be adopted as revisions to the water quality standards regulation.
- ▶ Revision of the language at 314 CMR 4.05(3)(a) to clarify that the designated uses for Class A waters include the CWA Section 101(a)(2) goal uses of protection and propagation of fish, shellfish, and wildlife and recreation in and on the water.
- ▶ Addition of a numeric dissolved oxygen criterion for warm water fisheries under Class A at 314 CMR 4.05(3)(a)(1).
- ▶ Deletion of the percent saturation values for dissolved oxygen for Class A, B, C, SA, SB, and SC waters at 314 CMR 4.05(3)(a)(1)(b), 4.05(3)(b)(1)(b), 4.05(3)(c)(1)(b), 4.05(4)(a)(1)(b), 4.05(4)(b)(1)(b), and 4.05(4)(c)(1)(b), respectively.
- ▶ Revision to 314 CMR 4.05(3)(a)(2)(a) and 4.05(3)(b)(2)(a), and the definition of cold water fishery at 314 CMR 4.02, to be consistent with regard to the averaging period for the numeric temperature criterion to protect cold water fisheries under Class A and Class B.
- ▶ Revision to 314 CMR 4.05(3)(a)(2)(a) and 4.05(3)(b)(2)(a) for Class A and Class B, respectively, to include a narrative temperature criterion protective of cold water aquatic communities where they exist at naturally occurring temperatures higher than the numeric criterion for cold water fisheries.
- ▶ Revisions to 314 CMR 4.06(1)(d)(7) emphasizing that where waters not designated as cold water fisheries support a cold water fish population, the cold water fish population and habitat will be protected as existing uses, whether or not the cold water criteria in 314 CMR 4.00 are met.
- ▶ Revision of the Class A public water supply bacteria criteria at 314 CMR 4.05(3)(a)(4)(a).
- ▶ Adoption of criteria utilizing the indicator bacteria recommended by EPA in Ambient Water Quality Criteria for Bacteria – 1986, EPA 440/5-84-002, January 1986, for all freshwater and coastal and marine waters with primary contact recreation as a designated use, i.e., Class A, B, SA, and SB waters, at 314 CMR 4.05(3)(a) and (b) and 4.05(4)(a) and (b).
- ▶ Revision of the fecal coliform bacteria criteria for protection of the shellfishing use at 4.05(4)(a)(4)(a).

- ▶ Adoption of a narrative water quality criterion for nutrients protective of existing and designated uses at 314 CMR 4.05(5)(c).
- ▶ Adoption of numeric water quality criteria for toxic pollutants at 314 CMR 4.05(5)(e) by specific reference to National Recommended Water Quality Criteria: 2002, EPA 822-R-02-047, November 2002.
- ▶ Clarifying revisions to the language that MassDEP adopted in 1996, at 314 CMR 4.05(5)(e), concerning the expression of metals criteria for aquatic life protection in terms of the dissolved fraction.
- ▶ Revision of 314 CMR 4.05(5)(e)(2) to specify a risk factor of 10^{-6} for application of human health criteria for carcinogens.
- ▶ Additions to language MassDEP adopted in 1996, at 314 CMR 4.06(1)(d)(11), clarifying that the goals for waters designated as B(CSO) and SB(CSO) remain those applicable to Class B and Class SB waters, respectively, except as identified in a CSO long term control plan supported by a use attainability analysis.
- ▶ Reclassification of waters as follows (for a complete list of the specific waters and segments, see the redline/strikeout copy of the MA WQS showing the adopted revisions and MassDEP's January 2, 2007 memorandum (with amendments of July 17, 2007) delineating revisions to the classification tables at 314 CMR 4.06, that were included with the January 12, 2007 submittal letter):
 - Reclassification of waters from Class B to Class A, by specific listing as Class A (11 waters).
 - Reclassification of a portion of the South River from Class SA to Class B.
 - Reclassification of a portion of the Saugus River from Class SB to Class B.
 - Designation of five Class B waters as Class B Treated Water Supply.
 - Designation of waters as Cold Water (122 waters).
- ▶ The addition of waters to those protected as Outstanding Resource Waters (Antidegradation Tier 2.5), by specific listing as ORWs (44 waters).
- ▶ Adoption of site-specific criteria for nitrogen for 16 waters at 314 CMR 4.06, Table 28.
- ▶ All additional water quality standards revisions identified in the redline/strikeout version of the regulations included with the January 12, 2007 submittal, except for the revisions identified in this letter as remaining under review. While the WQS revisions approved in this group are also important, they are generally more "housekeeping" in nature. Such revisions include those to the definitions at 314 CMR 4.02; addition of "natural" preceding "background" at appropriate

points throughout the water quality standards clarifying the reference for determining the degree of change in water quality that is consistent with a criterion or designated use; revisions to 314 CMR 4.04(2) and 314 CMR 4.06(1)(d)(4) to clarify that high quality water protection in accordance with the State's water quality standards is not limited to waters that are denoted as high quality in the classification tables; the addition of "existing" in several places such as 314 CMR 4.05(1) to emphasize that existing uses as well as designated uses are protected; revision of language at 314 CMR 4.05(4)(a) and (b), and 4.06(1)(d)(5) to clarify that where a shellfishing use is designated for Class SA and Class SB waters, that goal remains in place regardless of whether the water is approved for use in accordance with the National Shellfishing Sanitation Program; addition of "wildlife" to 4.05(5)(e)(3); deletion of a statement at 4.06(1)(e) that shellfishing and public water supply are higher than the national goal uses; revision of the classification tables at 314 CMR 4.06 to include "B(CSO)" and "SB(CSO)" for waters so classified by revisions previously approved by EPA; and reorganization of waters within basins and between basins without change in classification in the tables at 314 CMR 4.06, including removal of Broad Brook in the Hudson Basin from the tables at 314 CMR 4.06, as described in "Summary of revisions to tables to the MA Surface Water Quality Standards," January 2, 2007 (with amendments of July 17, 2007).

Several of the revisions approved above (related to compliance schedules at 314 CMR 4.03(1); metals criteria at 314 CMR 4.05(5)(e); and variances and B(CSO) and SB(CSO) classifications at 314 CMR 4.03(4) and 314 CMR 4.06(1)(d)(10)) amended revisions that MassDEP adopted on February 23, 1996 and submitted to EPA by letter of April 10, 1996. EPA had withheld action on the 1996 revisions pending completion of the further amendments. This approval covers the revisions of 1996 as amended in 2006. In addition, this approval covers the remaining revision from 1996, which amended the antidegradation provision at 314 CMR 4.04 by changing the term for permission to discharge into high quality waters from "variance" to "authorization." EPA is approving this change as a helpful clarification.

EPA's approval of the Massachusetts surface water quality standards revisions does not extend to waters that are within Indian territories and lands. EPA is taking no action to approve or disapprove the State's revisions with respect to those waters at this time. EPA will retain responsibility under Sections 303(c) and 303(d) of the Clean Water Act for those waters.

EPA has determined that the following are not water quality standards subject to EPA review and action under Section 303(c) of the Clean Water Act: the revisions at 314 CMR 4.03(1)(a) concerning margins of safety when establishing water quality based effluent limitations in permits; the revisions at 314 CMR 4.05(5)(e)(4) concerning intergovernmental coordination and public notice of water quality based effluent limitations based on EPA recommended criteria; and the revision at 314 CMR 4.06(1)(d)(12) that prohibits point source discharges to vernal pools. Though these provisions are not water quality standards, they are important in the implementation of water programs to meet criteria and protect uses.

We are still reviewing the revisions to the definition of Secondary Contact Recreation at 314 CMR 4.02; the revision at 4.04(6) concerning applicability of MassDEP's antidegradation implementation procedures; the Antidegradation Implementation Procedures document; revisions concerning thermal effluent limitations established in accordance with Section 316 of

the CWA at 314 CMR 4.05(3)(b)(2)(c), 4.05(3)(c)(2)(c), 4.05(4)(a)(2)(c), 4.05(4)(b)(2)(c), and 4.05(4)(c)(2)(c); revisions concerning the applicability of MassDEP's water quality standards to cooling water intake structures at 314 CMR 4.05(3)(b)(2)(d), 4.05(3)(c)(2)(d), 4.05(4)(a)(2)(d), 4.05(4)(b)(2)(d), and 4.05(4)(c)(2)(d); revisions of the bacteria criteria to protect secondary contact recreation at 314 CMR 4.05(3)(c)(4) and 4.05(4)(c)(4); revisions concerning the applicability of MassDEP's water quality standards to desalination facility intake structures at 314 CMR 4.05(4)(a) and 4.05(4)(b); the deletion of "natural seasonal and daily variations shall be maintained" from the temperature criteria at 314 CMR 4.05(4)(a)(2)(b), 4.05(4)(b)(2)(b), and 4.05(4)(c)(2)(b); reclassification of 4 waters from Class A (listed) to Class B (not listed) in the tables at 314 CMR 4.06; reclassification of a portion of the Palmer River from Class B to Class SB Shellfishing in the tables at 314 CMR 4.06; and the adoption of site-specific total phosphorous criteria for waters as listed at 314 CMR 4.06, Table 28. Therefore EPA is not taking action with respect to those revisions at this time. The water quality standards regulation at 40 CFR 131.6 outlines the minimum elements to be included in a State's submittal of water quality standards for EPA review. Information supporting revisions to the standards is one of those elements. EPA will contact your staff if further information is needed to complete our review.

Supporting Discussion of Approval

Water Quality Criteria

Numeric Water Quality Criteria for Toxic Pollutants

MassDEP revised its numeric criteria for toxic pollutants (for freshwater and saltwater aquatic life and human health protection) at 314 CMR 4.05(5)(e) by adopting EPA's National Recommended Water Quality Criteria: 2002, EPA 822-R-02-047, November 2002. The numeric values contained in EPA's November 2002 recommendations replace MassDEP's previous adoption by reference of EPA's Section 304(a) criteria guidance for toxic pollutants. EPA's approval is based on a review of whether the criteria protect the applicable designated uses and our conclusion that they do so for the reasons explained in EPA's 2002 criteria guidance. MassDEP adopted a risk level of 1×10^{-6} for application of the human health criteria for carcinogens. In its response to comments MassDEP indicated its intent to adopt EPA criteria recommendations that have been updated subsequent to the November 2002 table in the next water quality standards revisions.

MassDEP's revision at 314 CMR 4.03(3)(d) to recognize that the long term harmonic mean flow may be used for application of human health criteria is consistent with EPA guidance concerning appropriate instream design flows (Revisions to the Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000), 65 FR 66450, November 3, 2000). EPA's approval is based on a determination that use of the harmonic mean flow would be protective of designated uses for the reasons stated in the guidance. A provision at 314 CMR 4.03(3) allows MassDEP to apply criteria at lower flows other than those specified if necessary to protect existing and designated uses.

In its January 12, 2007 submittal letter and response to EPA comments, MassDEP confirmed that the duration and frequency components of EPA's criteria guidance will be used along with the magnitude values unless alternate averaging periods are justified and adopted. Therefore, for the aquatic life criteria, the criterion maximum concentration (CMC) should not be exceeded for longer than one hour on average more frequently than once in three years on average, and the criterion continuous concentration (CCC) should not be exceeded for longer than four days on average more frequently than once in three years on average.

Dissolved Metals Criteria for Aquatic Life Protection

In 1996 MassDEP revised its water quality standards at 314 CMR 4.05(5)(e) to express its metals criteria for aquatic life protection in terms of the dissolved fraction, where applicable, in accordance with "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria." (USEPA, 1993f). MassDEP's revisions of December 29, 2006 clarify the conversion from total recoverable criteria to dissolved criteria, the distinction between criteria and permit limits, and the requirement that permit limits established to meet the dissolved criteria are to be expressed as total recoverable metal. EPA's approval is based on a determination that the criteria are protective of uses for the reasons discussed in the above referenced guidance and the Water Quality Standards Handbook: Second Edition, EPA-823-B-94-006, August 1994.

Dissolved Oxygen Criteria

For all of its use classifications (Class A, B, C, SA, SB, and SC), MassDEP removed the percent saturation values that accompanied the minimum concentration based dissolved oxygen (DO) criteria and the narrative requirements to maintain natural seasonal and daily variations necessary to protect existing and designated uses. EPA's review of these revisions included consideration of how EPA's 304(a) criteria guidance for DO is expressed, and consideration of the role of the percent saturation values relative to the retained requirement to maintain natural seasonal and daily variations necessary to protect uses.

EPA's criteria recommendations for DO are expressed as concentrations and do not include percent saturation values. Further, the requirement to maintain natural seasonal and daily variations necessary to protect uses continues to provide MassDEP with the ability to ensure protection where the concentration based numeric criteria alone are not adequate. In its January 12, 2007 submittal letter and response to EPA comments, MassDEP stated that the retained language is meant to be protective of early life stages and further noted that additional revisions to each use class emphasize that protection of habitat for aquatic life and wildlife includes protection of "reproduction, migration, growth and other critical functions." EPA's approval is based on a determination that removal of the percent saturation values does not have a significant effect on the protectiveness of MassDEP's DO criteria.

We note that in the revisions to the Class SB DO criteria at 4.05(4)(b)(1), "natural" was omitted from the requirement to maintain seasonal and daily variations necessary to protect uses. Given that "natural" was in the previous expression of this provision for Class SB as well as for the other use classes, and that natural was retained in the revisions for the other use classes, EPA has

confirmed with MassDEP that the omission was not intended, and that the provision has the same intent for Class SB as it does for the other use classifications.

While Class A previously provided for both cold and warm water fisheries with numeric temperature criteria for each, it included just a single minimum DO criterion of 6.0 mg/l, without distinction between cold and warm water. This ambiguity has been eliminated with the addition of a Class A warm water DO criterion, at 314 CMR 4.05(3)(a)(1). Just as Class A and B have the same temperature criteria for cold and warm water, respectively, the protection with regard to DO has also been set the same for Class A and B for cold and warm water, respectively (i.e., the DO and temperature criteria for cold water fisheries differ from the DO and temperature criteria for warm water fisheries, but the cold and warm water criteria do not differ by use class). Before applying the warm water criteria, it is important that MassDEP first determine that cold water fishery is not an existing use and that a cold water fishery is not attainable.

Bacteria Criteria for Class A Public Water Supply

MassDEP revised its bacteria criteria for Class A public water supplies at 314 CMR 4.05(3)(a)(4)(a) to apply specifically to unfiltered public water supplies consistent with 40 CFR 141.71(a). EPA has determined that MassDEP's criteria and conditions for bacteria are as stringent as the federal rule referenced above, which implements the Safe Drinking Water Act.

Bacteria Criteria for Primary Recreation

MassDEP revised its bacteria criteria for the protection of primary contact recreation for Class A, B, SA, and SB waters to be consistent with both EPA's recommended geometric mean and single sample maximum at the "designated beach" level of protection (Ambient Water Quality Criteria for Bacteria – 1986, EPA440/5-84-002, January 1986). EPA is approving the revised bacteria indicators and criteria numbers as being protective of designated uses for the reasons discussed in EPA's 1986 criteria document. The new criteria for E. coli and enterococci replace the fecal coliform criteria that had been in MassDEP's regulation to protect primary contact recreation. Fecal coliform remains the indicator used by MassDEP for the criteria that are specific to shellfishing.

EPA has also made a determination that the Massachusetts water quality standards are now consistent with the federal rule, Water Quality Standards for Coastal and Great Lakes Recreation Waters, 69 FR 67218, November 16, 2004, that promulgated bacteria criteria for certain states for certain coastal waters, including Class SA and Class SB waters in Massachusetts. The revisions approved here for Massachusetts Class SA and Class SB waters satisfy both Sections 303(c) and 303(i) of the CWA and constitute the basis for Massachusetts to be removed from the federal rule. As explained in the federal rule, the standards for bacteria approved here will be in effect for CWA purposes (as opposed to the criteria at 40 CFR 131.41) between the time of this approval and formal withdrawal of Massachusetts from the federal rule.

Bacteria Criteria for Shellfishing

For Class SA waters at 4.05(4)(a)(4)(a), MassDEP revised the fecal coliform value that is not to be exceeded in more than 10% of samples from 43 per 100 ml to 28 per 100 ml. EPA's approval is based on a determination that the new more stringent value, combined with the geometric mean criterion of 14 per 100 ml, remains protective of shellfishing for direct consumption consistent with the National Shellfish Sanitation Program and for the reasons discussed in EPA's criteria guidance (Quality Criteria for Water 1986, EPA 440/5-86-001).

Temperature

The definition of cold water fishery in the Massachusetts water quality standards previously included a mean monthly temperature value of 68°F, while the temperature criterion for cold water fisheries was 68°F expressed as a value not to be exceeded. MassDEP has resolved this discrepancy by revising both the cold water definition and the cold water criterion to be 68°F expressed as a maximum seven day average consistent with the values presented for growth in EPA's ambient water quality criteria guidance for temperature (Quality Criteria for Water 1986, EPA 440/5-86-001). EPA's approval is based on a determination that the revision is protective of uses for the reasons discussed in EPA's guidance.

MassDEP also revised its temperature criteria to include a narrative criterion protective of cold water aquatic communities where they exist at naturally occurring temperatures higher than the numeric criterion for cold water fisheries. EPA is approving this provision because it provides additional protection of uses.

Narrative Criterion for Nutrients

MassDEP has adopted a narrative criterion for nutrients at 314 CMR 4.05(5)(c), which includes several provisions. It prohibits nutrients in amounts that would cause or contribute to the impairment of existing and designated uses, and addresses the role of TMDLs and site specific criteria. In addition, it includes (in slightly modified form) the nutrient-related provisions for existing point and nonpoint sources that had previously been in the antidegradation section of the water quality standards at 314 CMR 4.04(5). It specifies that existing point sources of nutrients in concentrations that would cause or contribute to cultural eutrophication shall be provided with "the most appropriate treatment," which can include certain specified levels of technology ("BAT" and "HBPT" for non-POTWs and POTWs, respectively), and nonpoint sources are to be provided with "cost effective and reasonable" BMPs. It is EPA's understanding that these latter provisions are not intended to interpret, modify, or supersede the general prohibition against nutrients at levels that would impair uses, but rather to inform the regulated community of requirements that will generally be imposed where nutrients are a concern. In the event that the specified level of treatment is not sufficient to ensure that uses are protected, then additional steps would be needed to meet the narrative criterion (unless a use attainability analysis supports a revised use goal and an accompanying criterion that does not require additional controls beyond the specified treatment technology). EPA's interpretation is based on past practice (implementing the preexisting narrative criterion at 314 CMR 4.05(5)(c) and the antidegradation provision at 314 CMR 4.04(5)), and on MassDEP's January 12, 2007 response to EPA's March 8, 2006 request for clarification. Based on this interpretation, EPA is approving the provisions at 314 CMR 4.05(5)(c) as being consistent with 40 CFR 131.11(b)(2).

Site-specific Nitrogen Criteria

As explained in the document referenced below, the site-specific criteria were developed based on measured water column nitrogen concentrations associated with the presence of high and stable habitat quality. Such nitrogen levels were determined to be necessary to restore or maintain the habitat associated with Class SA waters, defined as habitat supportive of eelgrass and infaunal communities. EPA's approval is based on a determination that the site-specific criteria are protective of uses for the reasons discussed in "Linked Watershed-Embayment Model to Determine Critical Nitrogen Loading Thresholds for Stage Harbor, Sulfur Springs, Taylors Pond, Bassing Harbor, and Muddy Creek, Chatham, Massachusetts," MassDEP & University of Dartmouth School of Marine Science and Technology, Final Report-December 2003.

Site-specific Criteria Adoption

EPA's approval of the revisions at 314 CMR 4.05(2) and 4.05(5)(e)(1) regarding MassDEP's adoption of site-specific criteria is based on a determination that these provisions are consistent with 40 CFR 131.11(b)(1)(ii). In approving these revisions, it is EPA's understanding that "supersede" means that, once adopted and approved by EPA, a site-specific criterion for a parameter will apply in place of the otherwise applicable criterion for that same parameter, as explained in MassDEP's January 12, 2007 submittal letter and response to EPA comments.

Compliance Schedules

EPA's approval of the revisions clarifying when MassDEP may provide for compliance schedules in National Pollutant Discharge Elimination System (NPDES) Permits is based on a determination that the conditions are consistent with EPA's interpretation of the "Star-Kist decision" (In The Matter of Star-Kist Caribe, Inc., 3 E.A.D. 172, (Adm'r 1990), as most recently outlined by EPA in a letter of May 10, 2007, from EPA Office of Water to EPA Region 9.

MassDEP's revised water quality standards provide that "A schedule of compliance shall require compliance at the earliest practicable time," whereas the federal regulation at 40 CFR 122.47 concerning compliance schedules requires compliance at the earliest "possible" time. EPA has determined that "practicable" has the same meaning as "possible" as used in the federal regulation. In its review of the compliance schedule provision, EPA sought clarification from MassDEP on certain issues. Those clarifications are in MassDEP's letter of September 10, 2007. Those clarifications confirm that the compliance schedule provision is consistent with federal requirements.

Mixing Zones

EPA's approval of the prohibition of lethality to organisms passing through mixing zones is based on a determination that the condition is consistent with EPA's mixing zone guidance as discussed in EPA's Advanced Notice of Proposed Rule Making, 63 Fed. Reg. 36787-36792, July 7, 1998, and is protective of uses for the reasons discussed in the guidance.

Variances

In its response to comments concerning revisions to 314 CMR 4.03(4), MassDEP indicated that variances are not water quality standards revisions because variances are temporary and the underlying designated use remains in place (see “Summary of comments received on MassDEP’s proposed revisions to Surface Water Quality Standards, 314 CMR 4.00, and MassDEP’s responses”). EPA agrees that variances are temporary and that the underlying designated use remains in place; however, the federal interpretation is that variances are revisions to water quality standards and therefore subject to EPA review and approval or disapproval (see EPA’s Advanced Notice of Proposed Rule Making (“ANPRM”), 63 FR 36742, 36759-60 (July 7 1998), and EPA’s Water Quality Standards Handbook: Second Edition, EPA-823-B-94-006, August 1994). Despite MassDEP’s interpretation, we note that recent variances issued by MassDEP have been consistent with EPA’s interpretation of the water quality regulations at 40 CFR Part 131 for allowing variances, including an opportunity for public participation, satisfaction of the same substantive and procedural requirements mandated in 40 CFR 131.10(g) for removing a designated uses, and submittal to EPA for review and approval. EPA’s understanding is that MassDEP’s issuance of variances to water quality standards will continue to be consistent with this process. MassDEP’s revision of 314 CMR 4.03(4) is consistent with the federal requirements and EPA’s understanding of MassDEP’s issuance of variances and is approved on this basis.

Use Classifications and Reclassifications

Class A Designated Uses

EPA’s regulations at 40 CFR Part 131 require designation of the CWA Section 101(a)(2) uses for all waters unless it is determined through use attainability analyses that such uses are not attainable (see EPA’s ANPRM, 63 FR 36742, 36748 (July 7, 1998). EPA’s approval of the revisions at 314 CMR 4.05(3)(a) is based on a determination that they clarify that the full CWA Section 101(a)(2) uses are designated for Class A consistent with the federal regulation. We recognize that in the case of existing public water supplies there may be other state or local provisions that restrict recreational access for the purpose of protecting the water supply. The language “even if not allowed” emphasizes that where such restrictions exist the designated uses remain in place, as well as the criteria to protect those uses.

Class B to Class A

The reclassification of waters from Class B to Class A is consistent with the CWA because the waters’ designated use goals continue to be consistent with the uses specified at Section 101(a)(2) of the CWA, and the applicable criteria are either the same or more stringent (see “Summary of revisions to tables to the MA Surface Water Quality Standards,” January 2, 2007 (with amendments of July 17, 2007) that accompanied the January 12, 2007 submittal for the list of waters).

Class SA to Class B

As explained in MassDEP's "Summary of revisions to tables to the MA Surface Water Quality Standards," January 2, 2007 (with amendments of July 17, 2007), a portion of the South River that is freshwater had been incorrectly assigned a saltwater classification. Based on MassDEP's explanation, it is EPA's understanding that the revision corrects the error in classification and there are no existing uses reliant on saltwater to be impacted by this action. Further, Class B includes designated uses consistent with Section 101(a)(2) of the CWA and criteria to protect those uses.

Class SB to Class B

As explained in MassDEP's "Summary of revisions to tables to the MA Surface Water Quality Standards," January 2, 2007 (with amendments of July 17, 2007), a portion of the Saugus River that is freshwater had been incorrectly assigned a saltwater classification. Based on MassDEP's explanation it is EPA's understanding that the revision corrects the error in classification and there are no existing uses reliant on saltwater to be impacted by this action. Further, Class B includes designated uses consistent with Section 101(a)(2) of the CWA and criteria to protect those uses.

Designation of Class B Waters as Class B Treated Water Supply

As explained in MassDEP's "Summary of revisions to tables to the MA Surface Water Quality Standards," January 2, 2007 (with amendments of July 17, 2007), and MassDEP's January 12, 2007 submittal letter and response to EPA comments, certain Class B waters in the Narraganset Bay/Mt. Hope Bay Drainage Area and in the Blackstone Basin are used as a source of public water supply in Rhode Island. MassDEP has acknowledged the public water supply use by designating the waters as Class B Treated Water Supply. This designation is consistent with Section 303(c) of the CWA and 40 CFR 131.10(a) which direct states to consider public water supply as a designated use where appropriate.

B(CSO) and SB(CSO)

In 1996 MassDEP adopted revisions to its water quality standards related to the regulation of CSOs. Part of those revisions created what is referred to as B(CSO) or SB(CSO), for fresh and saltwaters respectively, for classification of waters that with the support of a use attainability analysis (UAA) would continue to achieve less than full support of CWA Section 101(a)(2) goal uses after implementation of a CSO long term control plan (LTCP). Consistent with 40 CFR Part 131 and its requirements that water quality standards include designated uses for waters and criteria to protect those uses, the 2007 revisions clarify that the goals for B(CSO) and SB(CSO) waters are the same as for B and SB waters except as identified in the UAA supported CSO long term control plan. The UAA and LTCP provide information concerning the extent that a given B(CSO) or SB(CSO) water is expected to fall short of fully meeting Class B or SB uses and criteria.

Determination of Feasibility of Use Attainment in Accordance with 40 CFR 131.10(g)(6)

The language at 314 CMR 4.03(4)(f) is revised to state that a demonstration that 40 CFR 131.10(g)(6) is satisfied may include “documentation of median household income or other economic measures adjusted to reflect the cost of living or other circumstances particular to the affected area.” EPA’s approval is based on a determination that the language added does not modify the meaning of the federal language adopted by MassDEP. Rather, the added language highlights economic considerations that could affect an evaluation of affordability in the determination as to whether additional controls more stringent than those required by Section 301(b) and 306 of the CWA would result in widespread economic and social impact.

Antidegradation

Special Resource Waters

Though generally providing a high level of protection, MassDEP’s Outstanding Resource Waters (ORW) provision at 314 CMR 4.04(4) could allow for more than short term and temporary changes in water quality. Therefore MassDEP adopted a new “Special Resource Water” (SRW) provision that limits any lowering of water quality to short term and temporary consistent with EPA’s regulation at 131.12(a)(3) for Outstanding National Resource Waters (see EPA’s Water Quality Standards Handbook: Second Edition, EPA-823-B-94-006, August 1994). EPA’s approval of the new SRW provision is based on a determination that it ensures that the Massachusetts water quality standards provide opportunity for Outstanding National Resource Water (ONRW) protection consistent with the federal antidegradation policy at 40 CFR 131.12. The State’s ORW provision is more like what is referred to as “Tier 2.5” antidegradation protection.

In finalizing the language for SRWs, consistent with a comment received from the US Fish & Wildlife Service, MassDEP omitted a demonstration that a lowering of water quality is necessary to accommodate important economic or social development (“Summary of comments received on MassDEP’s proposed revisions to Surface Water Quality Standards, 314 CMR 4.00, and MassDEP’s responses”). It is EPA’s understanding that MassDEP omitted such a test because SRWs are not candidate receiving waters for discharges of a type that are generally associated with the determination of need to accommodate important economic or social development (similar to the situation with Outstanding Resource Waters). Therefore, to include such a test might have implied that discharge possibilities to SRWs are greater than intended by the requirement that discharges to such waters are limited to those that result in only temporary short term changes in water quality without permanent effects. Thus, EPA believes that MassDEP’s omission of the test had the intent of emphasizing the narrow extent to which discharges and degradation in SRWs are allowed consistent with the federal regulations at 40 CFR 131.12(a)(3) for waters receiving the ONRW level of protection.

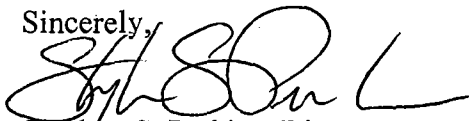
Protection of Cold Water Fisheries as Existing Uses

Working with the Massachusetts Division of Fisheries and Wildlife, MassDEP has revised its water quality standards to emphasize that where waters not designated as cold water support a cold water fish population, the cold water fish population and habitat will be protected as existing uses, whether or not the cold water criteria in 314 CMR 4.00 are met. EPA is approving

these revisions as being consistent with the federal antidegradation policy at 40 CFR 131.12(a)(1).

We look forward to continued cooperation with Massachusetts in the development, review, and approval of water quality standards pursuant to our responsibilities under the Clean Water Act. Please contact me or Bill Beckwith (617-918-1544) of my staff if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen S. Perkins", written over a horizontal line.

Stephen S. Perkins, Director
Office of Ecosystem Protection

cc: Glenn Haas, MassDEP
Marcia Sherman, MassDEP
Rick Dunn, MassDEP
Russell Isaac, MassDEP
Vernon Lang, USF&WS
Mary Colligan, NOAAF
Peter Colossi, NOAAF
Gregory Stapleton, EPA SSB